

BACKGROUND

May 1, 1996

ACCELERATED NATIONAL BALLISTIC MISSILE DEFENSE PROGRAM COULD BE VERY COSTLY

The Clinton Administration's defense plan includes about \$2.8 billion for the Ballistic Missile Defense Organization (BMDO) in FY 1997 and a total of \$13.5 billion for BMDO programs through FY 2001. The administration's plan focuses on the development and near-term deployment of theater missile defense (TMD) systems designed to protect U.S. forces deployed abroad from attacks by tactical and theater-range ballistic missiles. Under the administration's plan, national missile defense (NMD) efforts are limited to a "technology readiness" program that would allow the United States "to develop within three years, elements of an initial NMD system that could be deployed within three years of a deployment decision" should a new ballistic missile threat to the United States emerge.

In contrast, some members of Congress favor committing the United States to the deployment of a NMD system in the near future. Specifically, Senate Majority Leader Bob Dole, Speaker of the House Newt Gingrich and others have introduced legislation to establish, as U.S. policy, the goal of deploying a NMD system by the end of 2003 that "is capable of providing a highly effective defense" of U.S. territory against limited, unauthorized or accidental ballistic missile attacks. In addition, the bill calls for the system to be "augmented over time to provide a layered defense against larger and more sophisticated threats." The legislation, also known as the "Defend America Act of 1996," was recently approved by the Senate Armed Services Committee (SASC) and is scheduled for a House vote in mid-May. The SASC and the House National Security Committee (HNSC) also appear likely to add as much as \$1 billion to the administration's FY 1997 request for BMDO.

How Much is Enough?

It is impossible to estimate precisely the cost implications of the "Defend America Act." Most importantly, this is because — while the bill lists several goals for a NMD system and a wide variety of candidate technologies, including ground-based interceptors, as well as space-based sensors, kinetic energy interceptors and directed energy weapons — it does not specify a particular system to be developed or deployed. The best that can be done is to provide cost estimates for a range of NMD systems that would appear to be consistent with the requirements set forth in the bill. Reasonable estimates of the additional funding that would be required to deploy such a system range from about \$5 billion for a very limited single-site, ground-based system — that might not meet the bill's requirement for a "highly effective defense" — to \$25 billion for a more robust single-site system that would include space-based sensors to \$44 billion for an "augmented" system that would include six ground-based interceptor sites, as well as space-based sensors and kinetic-energy interceptors.

PLEASE RETURN TO:

In addition to its high potential cost, there are other reasons to question the wisdom of accelerating the development and deployment of a NMD system.

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- No "rogue" state currently possesses a ballistic missile capable of striking the United States, nor is such a threat likely to emerge in the near-term future. The intelligence community's most recent threat assessment, from November 1995, anticipated it would be 15 years before any rogue state could build missiles capable of reaching the continental United States.
- A military revolution is underway. Rapid advances are occurring in information technologies critical to ballistic missile defense (e.g., sensing, discrimination and battle management). If DoD invests too much too soon in NMD, the United States could well be saddled with an obsolete system, requiring us to make another large capital investment, if and when a long-range missile threat actually does emerge.
- With deficit and tax reductions a priority, funds for defense will almost certainly remain tight. Given the existing mismatch between DoD's plans and projected funding levels, and the reluctance of Congress to substantially increase funding for defense, over the long term it is likely that the only way to pay for the expanded NMD effort called for in the "Defend America Act" will be to make offsetting reductions in other defense programs.¹
- Developing and deploying a NMD system might actually increase the risks to U.S. security by weakening the Anti-Ballistic Missile (ABM) Treaty. The "Defend America Act" would direct the president to pursue negotiations with Russia to allow for the deployment of a potentially very extensive NMD system, and to consider withdrawing from the ABM Treaty if a satisfactory agreement on changes to the treaty cannot be reached within one year of the bill's enactment.² Such a policy could substantially undermine Russian support for the START II Treaty, which mandates significant additional reductions in the size of Russian strategic nuclear forces.
- As shown by the U.S. military's experience with Iraqi Scud missiles during the Gulf War, theater-range ballistic missiles pose a significant, near-term challenge for U.S. forces deployed in combat operations overseas. As such, the administration's emphasis on TMD programs is appropriate, and its FY 1997 request for \$2.064 billion for TMD programs may well be adequate.

¹ Last year's congressional budget resolution would have provided \$13 billion more for defense over the FY 1997-FY 2002 period than last year's administration plan (Congress has not yet passed a budget resolution this year). Based on estimates by the General Accounting Office (GAO), Congressional Budget Office (CBO) and others, this appears to be substantially less than would be required simply to pay for DoD's current plans over the same period.

² The ABM Treaty permits the United States and Russia to deploy up to 100 ground-based missile interceptors at a single site. Among other things, however, the treaty does not permit the deployment of multiple NMD sites or space-based interceptors.

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Administration's FY 1997 BMDO Funding Request*

(millions of current dollars)

	FY96	FY97	FY98-FY01	FY97-FY01
NMD	722	508	1,600	2,100
TMD				
PAC-3 (Patriot)	667	597	1,900	2,500
Navy Lower Tier	299	311	1,200	1,500
THAAD	568	482	2,100	2,600
Other TMD	734	675	3,000	3,700
Support Technology	215	226	900	1,100
Management	147	0	0	0
TOTAL	3,352	2,799	10,700	13,500

*Funding includes procurement, military construction and research and development.
CSBA. Based on DoD data.

Cost Implications of the "Defend America Act"

According to BMDO director General Malcolm O'Neill, it would cost the United States about \$5 billion to acquire a very limited, single-site NMD system, consisting of a radar and perhaps 20 ground-based missile interceptors.³ It is unclear, however, whether such a system would meet the bill's requirement that the initially deployed NMD system be capable of providing a "highly effective defense" against a limited attack. General O'Neill has indicated that this system would only be capable of intercepting up to five "rudimentary" warheads, while Secretary of Defense William Perry has testified that "as I see the technical features of the system now, it would defend only the 48 contiguous states."⁴

A more ambitious, but still relatively limited, NMD system that would be consistent with the proposed bill⁵ might consist of 100 ground-based interceptor missiles deployed at a single site, along with a radar, a command and control center, and several dozen space-based (Space and Missile Tracking System, SMTS) sensors.⁶ In March 1995, the Congressional Budget Office (CBO) estimated that such a system would cost roughly \$29 billion (FY 1996 dollars) to develop and deploy.⁷ The administration's current plan appears to envision spending roughly \$600 million a year over the next five years on the development of NMD technologies, NMD follow-on and technology

³ John Donnelly, "O'Neill Fleshes Out Missile-Defense Objectives," *Defense Week*, April 15, 1996, p. 8.

⁴ John Donnelly, "Perry, Generals Strike Discordant Note On Missile-Defense," *Defense Week*, April 1, 1996, p. 5.

⁵ The bill itself would not provide any funding for an accelerated NMD effort. Additional funding would likely be provided through the regular defense authorization and appropriations acts.

⁶ The SMTS, formerly known as "Brilliant Eyes" is funded through the Air Force budget. The SMTS could also be used to support early warning and TMD capabilities.

⁷ See CBO, letter to the Honorable J. James Exon, Committee on the Budget, March 23, 1995.

support programs, and the SMTS program.⁸ This suggests that the additional cost of deploying this more elaborate, and presumably more effective, NMD system would be about \$25 billion.⁹

In addition to the deployment by 2003 of an initial "highly effective" NMD defense against limited attacks, the proposed "Defend America Act" calls for NMD defenses to be "augmented over time to provide a layered defense against larger and more sophisticated ballistic missile threats as they develop." This requirement might be satisfied by adding five additional NMD sites over the FY 2005-FY 2013 period (one every other year). According to CBO's March 1995 estimate, a NMD system comprising six ground-based interceptor missile sites, associated radars, command and control centers, and space-based sensors, would cost a total of about \$48 billion (FY 1996 dollars) to acquire. If a constellation of space-based kinetic energy interceptors were also added over this period, another \$6 billion (FY 1996 dollars) or more would likely be required, bringing total acquisition costs to perhaps \$54 billion.¹⁰ This would be about \$44 billion more than is projected to be provided for NMD-related programs based on a simple extrapolation of current funding levels.¹¹

The above estimates represent only rough projections of the potential acquisition costs of a range of NMD systems that might be consistent with the proposed "Defend America Act." It is *possible* that they may in some instances overstate those costs. For example, figures provided by BMDO indicate that it might be possible to deploy a single-site NMD system consisting of 100 ground-based interceptor missiles as well as space-based sensors for as little as an additional \$13 billion, rather than \$25 billion (as CBO's March 1995 estimate would seem to suggest).¹² Overall, however, it is far more likely these estimates *understate* rather than *overstate* likely costs. There are two principal reasons to believe this is the case. First, new weapon systems typically end up costing 20-40 percent more to acquire than originally estimated. Second, none of these estimates include the costs of operating and supporting a NMD system after it has been acquired (i.e., developed and procured). Yet, over the lifetime of a weapon system, operations and support (O&S) cost generally equal or exceed the system's acquisition costs.

⁸ Under the administration's FY 1997-FY 2001 plan, NMD programs would receive \$2.1 billion. In addition, \$1.126 would be provided for BMD support technology programs, including perhaps \$200 million for NMD-related efforts (assuming support technology funding is allocated proportionally between NMD and TMD programs). Over this same period, the Air Force apparently plans to provide about \$500 million for development of the SMTS.

⁹ This estimate assumes, to achieve an initial operational capability in 2003, the required \$29 billion in funding would have to be provided over the FY 1997-FY 2003 period and, absent a deployment decision, the administration would continue to provide an average of about \$600 million annually over the next seven years for NMD and associated programs (\$29 billion - \$4.2 billion = \$24.8 billion).

¹⁰ This figure has been converted from FY 1991 dollars. GAO, *Strategic Defense Initiative: 15 Year Funding Requirements* (Washington, DC: Government Printing Office, February 1992), pp. 10-11.

¹¹ As discussed earlier, under the administration's current plan about \$600 million annually is projected to be provided for NMD-related programs over the next five years. If funding were maintained at this level through FY 2013, a total of about \$10 billion would be projected to be provided for NMD-related programs. Thus deploying this system would require spending about \$43 billion (\$53 billion - \$10 billion = \$43 billion) more than would be projected for NMD-related programs based on a simple extrapolation of current funding levels. Since the administration's plan for NMD-related funding is not available beyond FY 2001, it is impossible to directly compare the cost of this expanded plan with the administration's plan for NMD.

¹² According to BMDO, increasing the number of ground-based interceptors from 20 to 100 and conducting additional tests would increase the cost of a single-site NMD deployment to \$8 billion, while deployment of SMTS would cost about \$5 billion. *Defense Week*, April 16, 1996, pp. 8-9.

Conclusion

Committing to the deployment of a NMD system at a time when the United States faces tight fiscal constraints and no new risk from intercontinental-range ballistic missiles seems ill-advised. Moreover, because of the fast pace of technological change, a NMD system acquired today could be obsolete by the time a long-range missile threat to the United States appears. Rather than prematurely deploying a NMD system, DoD should pursue a vigorous research and development effort to ensure that the United States has the option of deploying a more advanced and effective NMD system, if and when a new ballistic missile threat does emerge. Although it might make sense to make some changes to the administration's "three-plus-three" NMD plan, its basic approach seems preferable to the plan outlined in the proposed "Defense America Act." Finally, DoD investments to reduce the risks posed by other proliferation threats (i.e., nuclear, chemical and biological weapons) through a variety of means (e.g., Nunn-Lugar weapons dismantlement aide to the former Soviet Union, chemical and biological weapons defenses, and proliferation-related intelligence programs) could be "crowded out" by excessive spending on the development and deployment of a NMD system.

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The Center for Strategic and Budgetary Assessments (formerly the Defense Budget Project) is an independent, nonprofit, public policy research institute established to make clear the inextricable link between near-term and long-range military planning and defense investment strategies. The Center is directed by Dr. Andrew F. Krepinevich.